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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/000,283	11/15/2001	Karl-Werner Dorr	20496-290	9006

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EXAMINER

SLACK, NAKO N

ART UNIT PAPER NUMBER

3635

DATE MAILED: 02/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/000,283

Applicant(s)

DORR ET AL.

Examiner

Naoko Slack

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 November 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The information disclosure statement filed 11/15/02 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each U.S. and foreign patent; each publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed.

Copies of prior art to DE 20014536U and EP 1035591 were provided by Applicant and therefore have been considered; however, the remaining foreign documents referred to therein have not been considered.

### ***Specification***

The disclosure is objected to because of the following informalities:

On page 4, line 3, "26" should probably be -- 25 -- ;

On page 4, line 3 from the bottom, "25" should probably be -- 24 -- ;

On page 4, the last line, "26" should probably be -- 25 --.

Appropriate correction is required.

### ***Claim Objections***

Claim 4 is objected to because of the following informalities: on line 2, "26" should be -- 25 --. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Patent 10219949A in view of US Patent 5849107 to Itoyama et al.

Japanese Patent 10219949A discloses an insulated roof structure comprising a sheet metal panel (2) with upper and lower metal cover sheets (3 and 4), an intermediate layer of thermal insulation (5), and a solar panel (7) installed on a recess formed on the upper metal sheet. A solar panel integrally formed with the roof panel facilitates roof assembly while providing a waterproof, airtight solar panel.

While Japanese Patent 10219949A does not disclose the solar panel to be a flexible laminate, Itoyama et al. teaches a flexible laminate solar panel of amorphous silicon cells formed on a stainless steel substrate, which reduces the need for a thick roof plate and improves heat transfer efficiency (column 7, lines 51-62). Itoyama et al. also states that the amorphous silicon solar cell is superior in heat transfer efficiency. In view of Itoyama et al., it would have been obvious for one of ordinary skill in the art at the time the invention was made to form the solar panels of amorphous silicon cells and as a flexible laminate on the upper cover sheet Japanese Patent 10219949A for the benefit of more efficient heat transfer.

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While the solar panel of Japanese Patent 10219949A is attached to the panel with screws, the use of adhesive as a fastener is well known in the building arts and would have been an obvious design choice in this application, as solar panels need to be waterproof and airtight (page 1, last two lines). Adhesive does not require puncturing of the structural material, which produces possible points of water infiltration. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use an adhesive, such as a bitumous adhesive commonly used in tiling roofs, instead of metal fasteners to attach the solar panel to the roof panel. The bitumous adhesive is waterproof, and adhesives obviate the apertures used with metal fasteners.

While Japanese Patent 10219949A fails to show the solar panel cables exiting through the back of the roof panel, it would have been obvious and necessary to produce a hole in the roof panel to permit the solar panel's electrical connections to exit from between the solar and roof panels for attachment to an energy receiver. Likewise, it would have been obvious for one of ordinary skill in that art at the time the invention was made to further seal the gap between the exit hole and the cables to protect the solar panel from moisture.

***Prior Art Made of Record***

The following references are made of record: US Patent 5409549A to Mori and US Patent 6063996A to Takada et al. disclose solar roof panels integrally attached to roof panels.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Naoko Slack whose telephone number is (703) 305-0315. The examiner can normally be reached on Mon-Fri (6:00 am-2:30pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl D. Friedman can be reached on (703) 308-0839. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9326 for regular communications and (703) 872-9327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.



NS

February 9, 2003



Carl D. Friedman  
Supervisory Patent Examiner  
Group 3600